| Ref<br>#   | Hits | Search Query   | DBs   | Default<br>Operator | Plurals | Time Stamp       |
|------------|------|--|---|---------------------|---------|------------------|
| S1         | 1    | ("20050019235").PN.  | US-PGPUB;<br>·USPAT;<br>USOCR                         | OR                  | OFF     | 2007/08/01 16:15 |
| S2         | 2412 | 422/211.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR                          | OR                  | OFF     | 2007/08/01 11:53 |
| <b>S</b> 3 | 9051 | (ring or cylinder or Raschig) and (packing with density)                               | US-PGPUB;<br>USPAT;<br>USOCR                          | OR                  | ON      | 2007/08/01 11:53 |
| S4         | 21   | S2 and S3  | US-PGPUB;<br>USPAT;<br>USOCR                          | OR                  | ON      | 2007/08/01 14:43 |
| S5 .       | 158  | pressure with drop with packing with density   | US-PGPUB;<br>USPAT;<br>USOCR                          | OR                  | ON      | 2007/08/01 12:45 |
| S6         | 2    | S2 and S5  | US-PGPUB;<br>USPAT;<br>USOCR                          | OR                  | ON      | 2007/08/01 12:25 |
| S7         | 9    | S5 and (packed with reactor)   | US-PGPUB;<br>USPAT;<br>USOCR                          | OR                  | ON      | 2007/08/01 13:00 |
| S8         | 3    | (tube or tubular) with reactor with<br>packing with density with pressure<br>with drop | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR                  | ON      | 2007/08/01 13:11 |
| <b>S9</b>  | 182  | pressure with drop with (increase or increases) with packing                           | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR                  | ON      | 2007/08/01 13:12 |
| S10        | 13   | S9 and ((tube or tubular) with reactor)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR                  | ON      | 2007/08/01 15:24 |
| S11        | 1    | ("4511671").PN.  | USPAT;<br>USOCR                                       | OR                  | OFF     | 2007/08/01 14:43 |
| S12        | 259  | (methylpropenal or methacrolein) and (silver with catalyst)                            | US-PGPUB;<br>USPAT;<br>USOCR                          | OR                  | ON      | 2007/08/01 14:54 |
| S13        | 1125 | silver.ab. and catalyst.ab.  | US-PGPUB;<br>USPAT;<br>USOCR                          | OR                  | ON      | 2007/08/01 14:53 |

| S14 | 46    | S12 and S13   | US-PGPUB;<br>USPAT;<br>USOCR                          | OR | ON   | 2007/08/01 14:53 |
|-----|-------|---|---|----|------|------------------|
| S15 | 126   | (methylpropenal or methacrolein)<br>and (silver with catalyst) and<br>(isobutylene or butanol)          | US-PGPUB;<br>USPAT;<br>USOCR                          | OR | ON   | 2007/08/01 14:55 |
| S16 | 19    | S13 and S15   | US-PGPUB;<br>USPAT;<br>USOCR                          | OR | ON   | 2007/08/01 15:03 |
| S17 | 1     | ("20060245992").PN.   | US-PGPUB;<br>USPAT;<br>USOCR                          | OR | OFF  | 2007/08/01 15:03 |
| S18 | . 182 | pressure with drop with (increase or increases) with packing  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON   | 2007/08/01 15:10 |
| S19 | 13    | S18 and ((tube or tubular) with reactor)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON   | 2007/08/01 15:10 |
| S20 | 9     | S19 and porous  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON   | 2007/08/01 15:20 |
| S21 | 1     | porous with (Raschig or cylinder or<br>cylindrical) with decrease with<br>pressure with drop            | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON   | 2007/08/01 15:22 |
| S22 | 153   | porous with (Raschig or cylinder or<br>cylindrical) with (decrease or lower<br>or lowers) with pressure | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON ' | 2007/08/01 15:28 |
| S23 | 1     | S22 and ((tube or tubular) with reactor)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON   | 2007/08/01 15:24 |
| S24 | 4     | S22 and "422"/\$.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON · | 2007/08/01 15:39 |

| S25 | 593 | (porous with packing) and ((low or<br>lower or small or smaller or lessens<br>or decrease or decreases) with<br>pressure with (drop or difference or<br>differential))  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON   | 2007/08/01 15:40 |
|-----|-----|---|---|----|------|------------------|
| S26 | 14  | S25 and ((tube or tubular) with reactor)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON . | 2007/08/01 15:43 |
| S27 | 347 | S25 and reactor   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON   | 2007/08/01 15:43 |
| S28 | 18  | S27 and "422"/\$.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR | ON   | 2007/08/01 15:43 |
| S29 | 2   | (("4389338") or ("4248740")).PN.  | US-PGPUB;<br>USPAT;<br>USOCR                          | OR | OFF  | 2007/08/01 15:49 |
| S30 | 42  | (("3563913") or ("3565914") or ("3844981") or ("3937476") or ("3962136") or ("3962285") or ("4207210") or ("4212772") or ("4458032") or ("4471071") or ("4728634") or ("476105") or ("4761394") or ("4766105") or ("4808738") or ("4820675") or ("4829044") or ("4845296") or ("4393114") or ("4994587") or ("5100859") or ("5145824") or ("5187140") or ("5254786") or ("5380885") or ("5407888") or ("5418202") or ("5407888") or ("5703253") or ("5703253") or ("5705661") or ("5739075") or ("5801259") or ("6368998") or ("6498122") or ("6656874") or ("20020010094")). PN. | US-PGPUB;<br>USPAT;<br>USOCR                          | OR | OFF  | 2007/08/01 17:37 |
| S31 | 4   | (("4511671") or ("4645754") or<br>("4656157") or ("20020010378")).<br>PN.   | US-PGPUB;<br>USPAT;<br>USOCR                          | OR | OFF  | 2007/08/01 16:50 |

|     | · |  | T                            | ,  | T   |                  |
|-----|---|--|------------------------------|----|-----|------------------|
| S32 |   | (("3972829") or ("4005049") or ("4908343") or ("4797270") or ("4361504") or ("4366092") or ("4367167") or ("4810689") or ("4186106") or ("4125480") or ("4886917") or ("5057481") or ("2901441") or ("5734068") or ("5668077") or ("4874739") or ("4916243") or ("5486628") or ("5545603") or ("5663385") or ("5545603") or ("5037794") or ("4994588") or ("4994589") or ("4797279") or ("5374748") or ("4361500") or ("3895093") or ("4379134") or ("4244889") or ("4379134") or ("4420420") or ("4379134") or ("4420420") or ("628129") or ("6103916") or ("6281160") or ("5380697") or ("4361503") or ("2424083") or ("5457897") or ("4837194") or ("6511938") or ("3997476") or ("5447897") or ("4366093") or ("5447897") or ("4921681") or ("6325919") or ("20040225138") or ("20040224841") or ("6631890") or ("5626455") or ("5588986") or ("20020137957") or ("2238474")). PN. | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/08/01 16:51 |
| S33 | 0 | ("7259129").PN.  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/08/01 17:38 |
| S34 | 0 | ("7259129").PN.  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/08/01 18:00 |
| S35 | 1 | ("7102022").PN.  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/08/01 18:03 |
| S36 | 0 | ("7259129").PN.  | US-PGPUB;<br>USPAT;<br>USOCR | OR | OFF | 2007/08/01 18:04 |